

50



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,339	10/12/2001	Sunghyun Choi	US 010256	9236

24737 7590 06/15/2005

PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER

REID, CHERYL M

ART UNIT	PAPER NUMBER
----------	--------------

2142

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/976,339

Applicant(s)

CHOI ET AL.

Examiner

Cheryl M. Reid

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-24 have been examined. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Because new grounds of rejection are being applied against substantively unamended claims, this action is NON-FINAL.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,2-6, 7,8- 13, 14-16, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerwall et al (US 6868277) herein after Cerwall, and further in view of Marcoccia et al (US 6169761) herein after Marcoccia.

3. In regards to claim 1, Cerwall teaches of determining whether a new channel to be used by said plurality of STAs is needed (Col 5, lines 4-5); (b) measuring a channel quality of a plurality of frequency channels by said at least one STA (Col 3, lines 17-20); (d) selecting one of said candidate channels based on said channel quality report for use in communication between said AP and said plurality of STAs (Col 9, lines 1-15). (c) Cerwall teaches about reporting from said plurality of STAs to said AP of a list of candidate channels including a received signal strength indication (RSSI) (Col 5, lines 35-47, Fig 2) but does not explicitly teach of report also including a Clear Channel

Art Unit: 2142

Assessment (CCA) busy periods of all channels measured by said plurality of STAs.

Marcoccia teaches about using a Clear Channel Assessment as one of the deciding criteria in deciding if one should choose a particular channel (Col 3, lines 25-40). Clear Channel Assessment is part of the IEEE 802.11 standard and is used to decide if a channel is free. It is an objective of Cerwall to select (allocate) channels to users. It would have been obvious to one of ordinary skill in the art to incorporate CCA parameter into the report(i.e. list of candidate channels) because it is well know in the arts according to IEEE standards, that one has to know the status of a channel (i.e. busy/free) in order to decide if one can allocate it for another connection.

4. In regards to claim 7, the discussion of claim 1 applies to the limitations of claim 7 (a-c). In regards to the additional limitations of claim 7 (d-e), Cerwall teaches of determining whether a signal from an adjacent BSS is received by said plurality of STAs (Col 9, lines 16-30); (e) if said adjacent BSS signal or interfering signals of unknown type is detected, selecting a new channel based on the least interference to said channel quality or meeting other regulatory requirement for use in communication between said AP and said plurality of STAs according to the value of said RSSI (Col 6 lines 45-60).

5. In regards to claim 13 and 17, the discussion of claim 1 applies to the limitations of claim 13 and 17(a-c). In regards to the additional limitations of claim 13 and 17 (d-e), Cerwall teaches of measuring an interference level (Col 9, lines 15-30) and selecting said new channel representing the least interference signal level based on said measured RSSI, CCA, (Col 2, lines 35-45, Col 6 lines 45-60 ) but does not explicitly

Art Unit: 2142

teach of caused by another communication system based on a periodic presence of on/off busy CCA signals ; Marcoccia teaches on this aspect (Col 3, lines 25-40). One of ordinary skill in the art at the time of invention would have been motivated to make the above-mentioned modifications for the reasons discussed above in claim 1.

6. In regards to claims 2, Cerwall teaches of channel signal quality further includes an interference signal level caused by another communication device (Col 9, lines 15-30) but does not explicitly teach of interference signal level is based on a periodic presence of on/off busy CCA signals. Marcoccia teaches on this aspect (Col 3, lines 25-40). One of ordinary skill in the art at the time of invention would have been motivated for the same reasons discussed above in claim 13.

7. In regards to claim 3 and 4 , Cerwall teaches of selecting one of said candidate channels is based on the least interference to said channel....and other regulatory requirements (Fig 2, Fig 4).

8. In regards to claim 5-6, 8-9, 14-15, and 18-19 Cerwall teaches of the step of transmitting the selected channel information ....and plurality of STAs to said new channel (Col 13, lines 45-65, Fig 4c item 450).

9. In regards to claim 10 and 20, Cerwall teaches of new channel ....predetermined threshold (Fig 4c).

10. In regards to claims 11 - 12 and 16 Cerwall does not explicitly teach of .....based on a periodic presence....Marcoccia teaches on these aspects (Col 3, lines 25-40).

One of ordinary skill in the art at the time of invention would have been motivated for the same reasons as discussed in claim 13.

Art Unit: 2142

11. Claims 21, 22 –24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerwall and Marcoccia as applied to claim 1 and 7 above, and further in view of Kobylinski et al herein after Kobylinski (US 6694138).

12. In regards to claim 21, both Cerwall and Marcoccia did not explicitly teach of measure an interference level caused by another communication system based on a periodic absence of any 802.11 frame reception for a predetermined time period. Kobylinski teaches on these aspects (Col 4, lines 5-15). One of ordinary skill in the art at the time of invention would have been motivated for the reasons discussed in Claim 22.

13. In regards to claim 22, the discussion of claim 7 applies to the limitations of claim 22 (1-3, 5). In regards to the additional limitation of claim 22 (4), both Cerwall and Marcoccia did not explicitly teach of measure an interference level caused by another communication system based on a periodic absence of any 802.11 frame reception for a predetermined time period. Kobylinski teaches on these aspects (Col 4, lines 5-15). Kobylinski invention relates to improving mobile system handoff (Col 1, lines 14-15). It would have been obvious to one of ordinary skill in the arts at the time of invention to incorporate Kobylinski's teaching into Cerwall's invention because this modification would give

give him a more systematic method for measuring interference (i.e. measuring interference at a specific time). This would allow Cerwall's invention to accomplish his objective of obtaining the best overall performance of the cellular system as discussed by Cerwall (Col 5, lines 28-29). It is for this reason that one of ordinary skill in the art at

Art Unit: 2142

the time of invention would have been motivated to make the above-mentioned modifications.

14. In regards to claim 23 and 24, Cerwall teaches of the step of transmitting the selected channel information ....and plurality of STAs to said new channel (Col 13, lines 45-65, Fig 4c item 450).

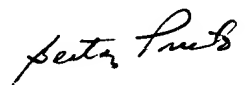
### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl M. Reid whose telephone number is 571 272 3903. The examiner can normally be reached on Mon- Fri (7-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dharia Rupal can be reached on (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmr

  
**BEATRIZ PRIETO**  
PRIMARY EXAMINER

Application/Control Number: 09/976,339  
Art Unit: 2142

Page 7